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OCTODICERAS JULIANUM, ITS PROPAGATION, DISTRIBUTION AND HISTORY.

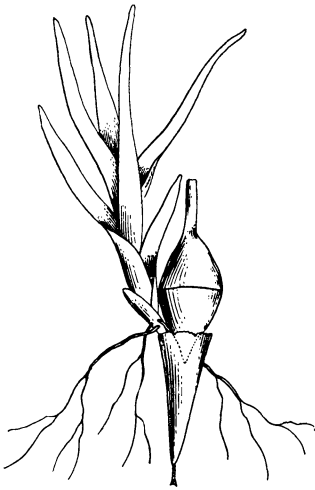
By E. G. BRITTON.

In the July number of this Journal, Mr. Hill has called attention to the propagation by shoots from the calyptra in this species as recorded by Schimper and Goebel. This may be more common than is generally supposed, as it is well known that the fruits of this species fall off, just before maturity, and float on the surface, many of them being quite green, with the calyptra still attached.

In November, 1891, Prof. D. C. Eaton sent me a slide from which the accompanying illustration has been made, showing a shoot arising from the inner part of the calyptra. The specimens had been kept in an aquarium, and were collected at Hamden, Connecticut, where this species was "abun-

dant in a bricked-up spring and also in a barrel fed by a pipe from this spring." Evidently it lives many years in one place for it had been collected in 1877 by Prof. Eaton at the same station.

The habitat of this species is more varied than is indicated by the Manual, and it may be looked for not only "on stones and branches in wooded creeks and swamps," but also in "rocky streams," and in still waters of lakes and ponds, on the border of rivers and in wells and fountains. It has been collected in the Delaware, Ohio, and Tennessee Rivers, and is represented in our collections in eighteen states, ranging from Ontario to Florida, from Minnesota to Louisiana, and from Texas to California. There is only one record from the Rocky Mountains, in Montana, R. S. Williams, though it was collected by E. Hall, probably in Colorado.



It was first distributed in 1841 in Drummond's Mosses of the Southern States, as *Fissidens semicompletus*, and it has since been issued in Exsiccatae by Sullivant and Lesquereux, Austin and Macoun.

Fissidens semicompletus Hedw. (Musc. frond. 3: 34, t. 13. 1792) was described and figured from specimens sent to Hedwig by Dickson, without locality, which Hedwig supposed to be the same as specimens figured by Dillenius (Hist. Musc. 259, t. 33. Fig. 4. 1741) from Patagonia, and which Dillenius states he had also seen in the herbarium of Wm. Sherard from New Providence, Bahamas. The name has been applied to a Chilean species by Mitten. Montagne called attention to the differences between the figures given by Dillenius and Hedwig, and stated that all doubts could only be removed by restudying the types. As far as can be determined this has

never been done. Bridel founded the genus *Octodicerias* in 1806 on Hedwig's plate, concluding that the peristome had only eight teeth, as Fig. 6 showed half the peristome with only four teeth, but he overlooked the fact, since noted by Montagne, that Fig. 7 has at least twelve. Mitten has perpetuated this mistake in his *Musci Austro-Americani*, by citing in his key, two species with eight teeth, *F. semicompletus* and *F. Mexicanus*, but the latter is known only from sterile specimens. To remedy this mistake, Montagne founded the genus *Conomitrium*, including *C. Julianum* and three South American species, which he named for Dillenius, Hedwig and Bertero, referring *F. semicompletus* Hedw. to *C. Hedwigii*. Jaeger and Sauerbeck recognized both genera in the *Adumbratio*, including several species of *Fissidens* under *Conomitrium*, notably *F. osmundioides* and *F. hyalinum*, and five South American and three North American species under *Octodicerias*. Schimper in the *Bryologia* and Limpricht in the *Laubmoose* used *Octodicerias* for *O. Julianum* but Limpricht does not make clear the priority of the specific name, as he omits the original place of publication. Lindberg by mistake took up the name of *O. fonatum* as will be seen by the following synonymy :

Octodicerias Julianum (Savi) Brid. Bryol. Univ. **2**: 678. 1827.

Fontinalis Juliana Savi, Fl. Pis. **2**: 414. 1798.

Skitophyllum fontanum La. Pyl. Journ. Bot. Desv. **5**: 52, t. 34, Fig. 2, 1813.

Fissidens debilis Schwaegr. Suppl. **2**: 11. 1816.

Conomitrium Julianum Mont. Ann. Sci. Nat. **8**: 246. t. 4. 1837.

Fissidens Julianus Sch. Flora **21**: i. 271. 1838.

Octodicerias fontanum Lindb. Bidrag Moss Syn. 23. 1863.

Our other species, *O. Hallianum*, is much smaller and more slender, with a more perfect peristome, and has been found growing with *O. Julianum* by Hall, on the stems of *Cephalanthus occidentalis* in a sunken hole at Athens, Illinois, the type locality. A note in Austin's herbarium shows that the habitat given by Austin, "in wells" is incorrect. It has also been collected on rocks moistened by spray at Little Falls and Ogdensburg, N. J., by Austin. At Caloosa, Florida, it was collected on the under side of logs in a Cypress swamp by J. D. Smith, and it grows on rocks at the water line in Lake Pend d'Oreille, Idaho, where it was collected by J. B. Leiberg. It is evident that it has almost as great an Eastern range as our more common species, and on account of its size, may have been often overlooked. Its synonymy is as follows:

Octodicerias Hallianum (Sull. & Lesq.) Jaeg. & Sauerb. Adumb. **1**. 33. 1874.

Conomitrium Hallianum Sull. & Lesq., Aust. Musci App. p. 20, no. 108 b. 1870.

Fissidens Hallianum Mitt. Journ. Linn. Soc. **21**: 551. 1885.

BRYUM PROLIGERUM (Lindb.) Kindb.

The study of this moss at Chilson Lake, Essex Co., N. Y., was brought to a sudden close in 1901 by the "wet crumbling roadside bank" giving way during a heavy rainfall, burying our treasure as we feared for all time, as

repeated search during the rest of the season failed to unearth even a single plant.

It is my good fortune, however, to find this summer on almost the identical spot a loose mat possibly a foot square. The weather so far this year has been cold and rainy and the plants examined under the microscope July 23rd show abundant gemmæ. See illustrations, etc., in *BRYOLOGIST* for October, 1901; also January, 1901, p. 12, and July, 1901, p. 50. There is evidence of a number of fertile plants in the mat, and it is hoped these will prove to be on the *Bryum* in which case a limited amount of material will be available for distribution.

A. M. S.

A NOTE

BY ANNIE MORRILL SMITH.

In company with other journals *THE BRYOLOGIST* comes in for its share of criticism without which it would be impossible to keep fully in touch with its subscribers and thereby modify and adjust its policy from time to time. The idea in starting this journal was to help a body of would-be students of the mosses; their number was unknown but it was felt to be sufficient to justify a beginning, so in January, 1898, a modest start was made with four pages. Before the year was out its place was assured and its growth and progress since then a matter of history.

The Editors have from the first enjoyed the cooperation of the advanced workers, as our pages testify, and when these friends counsel the printing of more technical articles it is hard not to fill our limited space with matter beyond the range of the beginner. This problem is very clearly set forth by Charles E. Bessey in a recent number of *Science* (July 25, 1902, No. 395, p. 157) and we are glad to record his endorsement of our policy. It is just because we have never been able to forget the ladder by whose help we mounted the first hard rounds that we have kept to the original idea of helping the beginner. We feel sure that the issues of the first four years of *THE BRYOLOGIST* constitute a very helpful handbook for those taking up the study of the mosses, hepatics and lichens, and that this ground need not be covered again by us. There still remains, however, a large gap between this elementary work which we have done and the *Manual of Lesquereux* and *James*. This was brought home very forcibly to me the past two weeks. During the exigencies of travel I was separated from my own copy of the *Manual* and obliged to use the spotless one of a friend and I realized then for the first time what a wealth of material exists only in such annotated copies as a few own who have had exceptional opportunities to correct, make additions, cross references and notes to the extent often of pages interleaved. Many of these notes and additions have been given from time to time in our pages by the various authors, but we do need one or more books leading one up to the place where intelligent use of the larger works of reference is possible. In the meantime *THE BRYOLOGIST* will continue a certain amount of elementary work, at the same time giving generous space to those further advanced.